Project Design Phase-II
Solution Requirements (Functional & Non-functional)

Date	20 OCTOBER 2022
Team ID	PNT2022TMID09862
Project Name	A Gesture-based Tool for Sterile Browsing of Radiology Image
Maximum Marks	4 Marks

Functional Requirements:

Following are the functional requirements of the proposed solution.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	Hand detection	Filtering of hand from video capturing device
FR-2	Filtered object detection	Reads and filters by recognizing clusters of skin coloured objects
FR-3	Gesture control	Hand gestures recognition for commands
FR-4	Hand calibration	Perform according to the adjustment of user's dominant hand
FR-5	Model rendering	When the user uploads/gives the gestures, the algorithm should start processing its task.
FR-6	Launching the model	Launch the application either from cloud where it is deployed or by installation but with a stable internet connectivity

Non-functional Requirements:

Following are the non-functional requirements of the proposed solution.

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	Usability is easy for all users. It is understandable for non technical users with minimal instructions
NFR-2	**Security**	Accessible only in secure networks with administrative permissions, so there is less chance of security breach
NFR-3	**Reliability**	It is operable under all conditions, regardless of user's operating environment
NFR-4	**Performance**	Minimize the number of calculation to perform hand gesture and to improve image resolution quality
NFR-5	**Availability**	When the gesture is available then only the application works. This application is only available in surgery rooms
NFR-6	**Scalability**	Model is scaled by CNN with help of data augmentation and gesture recognition using OpenCV, Tensor flow, Keras